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10/728,065	12/04/2003	Jitendra Mohan	P05748 (NATI15-05748)	7964
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/728,065

Applicant(s)

MOHAN, JITENDRA

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The amendment filed 11/13/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in essence, the newly added subject matter to paragraph [0018] of the specification is not supported by the original disclosure. For example, the applicant has amended the specification to include that the average power and average current will depend on the logical data value being transmitted particular times. This subject matter was not disclosed in the specification as originally filed. Furthermore, the newly added paragraphs [0025.1] – [0025.5] describing newly added Figure 4 were not part of and are not supported by the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The applicant recites, “wherein the average output power and at least one of an

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optical modulation amplitude and an extinction ratio of the light source are controlled based on logical data values of the transmitted data contained in the emitted light.” However, as noted above, the portion indicating that control is based on logical data values of the transmitted data contained in the emitted light is not supported by the specification as originally filed and therefore constitutes new matter.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 4-7, 9-10, 12-16, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kimmitt (U.S. Patent Application Publication No. 2003/0175037).

Regarding claims 1, 9, and 15, Kimmitt teaches a light source (reference numeral 34, 36, 38, 40 in Figure 5) capable of emitting light at a variable output power to transmit data at a given data rate; a monitor diode (reference numeral 58 in Figure 6) positioned to receive at least a portion of the emitted light, the monitor diode comprising a PIN diode (paragraph [0030]) having a bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate (paragraph [0009]; paragraph [0039]); and a controller (reference numeral 42 in Figure 5) capable of determining an average output power of the light source based on an output signal of the monitor diode (paragraph [0031]), comparing the average output power to a target value (i.e. the “quadrature point” throughout), and adjusting the variable output power of the light source

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by: incrementing or decrementing a logical 1 level current based on the comparison of the average output power to the target value (paragraph [0031]; paragraph [0032]); and determining a modulation current for the light source using the incremented or decremented logical 1 level current(paragraph [0031]; paragraph [0032]), wherein the average output power (i.e. by virtue of the ability to adjust the variable output power of the light source ; paragraph [0031], paragraph [0032]) and at least one of an optical modulation amplitude (i.e. by virtue of elimination of the amplitude modulation dither in the output signal paragraph [0030]) and an extinction ratio of the light source are controlled.

Regarding claims 2, 10, and 16, Kimmitt teaches that the bandwidth of the monitor diode is substantially less than the data rate (paragraph [0009]; paragraph [0039]).

Regarding claims 4, 12, and 18, the monitor diode of Kimmitt clearly functions as a low pass filter operating on the light emitted by the light source particularly when one considers the other elements to which it is attached (reference numeral 58, 60, 62, 64, 66 in Figure 6).

Regarding claims 5, 13, and 19, Kimmitt teaches peak detectors with decay capable of detecting a peak-to-peak amplitude of the output signal of the monitor diode, wherein the peak-to-peak amplitude is directly representative of optical modulation amplitude for the light source (paragraph [0052]).

Regarding claims 6, 14, and 20, Kimmitt teaches that the controller is capable of employing output signals from the peak detectors to control optical modulation amplitude or extinction ratio of the light source (paragraph [0051]).

Regarding claim 7, Kimmitt teaches that the system is included in an optical subassembly (reference numeral 34, 36, 38, 40 in Figure 5), the optical subassembly adapted for transmission of data over an optical transmission medium (i.e. the output of reference numeral 40 in Figure 5).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmitt.

Regarding claim 3, 11, and 17, Kimmitt differs from the claimed invention in that Kimmitt fails to specifically teach that the bandwidth of the monitor diode is less than or equal to one fortieth of the data rate. However, Kimmitt suggests as much via disclosure of a “low bandwidth photo detector” (paragraph [0009]; paragraph [0039]). Furthermore, as a matter of design choice, one skilled in the art would clearly have recognized the ability to select the bandwidth of Kimmitt’s low bandwidth photodetector so that the bandwidth of the monitor diode is less than or equal to between one tenth and one fortieth of the data rate. One skilled in the art would have been motivated to do so in order to detect the various low bandwidth dither signals employed by Kimmitt. Therefore, it would have been obvious to one skilled in the art at the time

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the invention was made to have selected the bandwidth of Kimmitt's monitor diode so that it is less than or equal to one fortieth of the data rate.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmitt in view of Kerem (U.S. Patent No. 7,065,303).

Regarding claim 8, Kimmitt differs from the claimed invention in that Kimmitt fails to specifically teach that the optical subassembly is included in a computer, the computer further comprising: a processor coupled to the controller; and a network connection through the optical subassembly to the optical transmission medium. However, Kerem teaches that it is well known in the art to include the optical subassembly is included in a computer (reference numeral 10 in Figure 1), the computer further comprising: a processor (reference numeral 16 in Figure 1) coupled to the controller (reference numeral 54 in Figure 3); and a network connection through the optical subassembly to the optical transmission medium (column 4 lines 35-43; column 5 lines 57-64). One skilled in the art would have been motivated to include the features of Kerem in order to manage, configure, monitor, and control the device of Kimmitt (column 4 lines 35-43 of Kerem). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include the optical subassembly in a computer, the computer further comprising: a processor coupled to the controller; and a network connection through the optical subassembly to the optical transmission medium.

***Response to Arguments***

9. Applicant's arguments filed 11/13/07 have been fully considered but they are not persuasive.

As noted in the rejection above, Kimmitt that the average output power (i.e. by virtue of the ability to adjust the variable output power of the light source; paragraph [0031], paragraph [0032]) and at least one of an optical modulation amplitude (i.e. by virtue of elimination of the amplitude modulation dither in the output signal paragraph [0030]) and an extinction ratio of the light source are controlled.

As to the ability of applicant's claimed invention to provide this control based on logical data values of the transmitted data contained in the emitted light, the examiner again notes that this subject matter is not supported by the specification as originally filed and therefore introduces new matter into the instant application.

***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'A. Bello', is positioned above the printed name and title.

Agustin Bello  
Primary Examiner  
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AB